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APPLICATION NO.	F1	LING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO.
09 935,156	(	08 23 2001	Mona Masghati	1027eo	1961
25263	7590	11 06 2002			
J GRANT			EXAMINER		
AXSUN TECHNOLOGIES INC I FORTUNE DRIVE				PATEL, TULSIDAS C	
BILLERICA, MA 01821			ART UNIT	PAPER NUMBER	
				2839	
			DATE MAILED: 11 06 2002		

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)				
		09/935,156	: MASGHATI ET AL				
i I	Office Action Summary	Examiner	Art Unit				
	•	T. C. Patel	2839				
Period fo	The MAILING DATE of this communication Reply	on appears on the cover sheet w	i i i i i i i i i i i i i i i i i i i				
THE - Exterest after - If the - If NC - Failure - Any I	ORTENED STATUTORY PERIOD FOR A MAILING DATE OF THIS COMMUNICAT insions of time may be available under the provisions of 37 (SIX (6) MONTHS from the mailing date of this communical experiod for reply specified above is less than thirty (30) days to period for reply is specified above, the maximum statutory are to reply within the set or extended period for reply will, by reply received by the Office later than three months after the end patent term adjustment. See 37 CFR 1.704(b).	ION.  CFR 1.136(a). In no event, however, may a ion.  5, a reply within the statutory minimum of the period will apply and will expire SIX (6) MC a statute, cause the application to become A	a reply be timely filed  hirty (30) days will be considered timely.  DNTHS from the mailing date of this communication.  ABANDONED (35 U.S.C. § 133).				
1)	Responsive to communication(s) filed o	n					
2a)	This action is <b>FINAL</b> . 2b)	This action is non-final.					
3) Dispositi	3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213. <b>Disposition of Claims</b>						
4) 🖸	Claim(s) $1-31$ is/are pending in the appli	cation.					
	4a) Of the above claim(s) is/are withdrawn from consideration.						
5)	5) Claim(s) is/are allowed.						
6)[	Claim(s) 1-31 is/are rejected.						
7)	Claim(s) is/are objected to.						
	Claim(s) are subject to restriction on Papers	and/or election requirement.					
9) 🗌 -	The specification is objected to by the Exa	ıminer.					
10) 🔲 -	The drawing(s) filed on is/are: a)	accepted or b) objected to by	the Examiner.				
	Applicant may not request that any objection						
11)	The proposed drawing correction filed on	is: a) ☐ approved b) ☐	disapproved by the Examiner.				
	If approved, corrected drawings are required	in reply to this Office action.					
12) 🔲 🗖	The oath or declaration is objected to by the	ne Examiner.					
Priority u	nder 35 U.S.C. §§ 119 and 120						
13)	Acknowledgment is made of a claim for fo	oreign priority under 35 U.S.C.	§ 119(a)-(d) or (f).				
a)[	☐ All b) ☐ Some * c) ☐ None of:						
	1. Certified copies of the priority docu	ments have been received.					
	2. Certified copies of the priority documents have been received in Application No						
	3. Copies of the certified copies of the application from the Internation ee the attached detailed Office action for	al Bureau (PCT Rule 17.2(a)).	S				
	cknowledgment is made of a claim for do						
a)	☐ The translation of the foreign languag	e provisional application has b	peen received.				
Attachment		, , ,					
2) Notice	e of References Cited (PTO-892) of Draftsperson's Patent Drawing Review (PTO-94 nation Disclosure Statement(s) (PTO-1449) Paper N	8) 5) Notice of	Summary (PTO-413) Paper No(s) Informal Patent Application (PTO-152)				
S Patent and Tra PTO-326 (Rev		ice Action Summary	Part of Paper No. 2				

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#### DETAILED ACTION

#### General Status

1. This is a First Action on the Merits for CIP. Claims 1-31 are pending in the case.

## Claim Rejections - 35 USC § 102

- 2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:
  - (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
  - (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
  - (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1, 2, 7, 8, 22, 23 and 26 are rejected under 35 U.S.C. § 102(e) as being anticipated by Do et al. (US 6,266,196).

Do et al. in figure 6, discloses an optical component 512, having an alignment feature at the button at 510, for positioning the optical component relative to an optical bench 502. The alignment feature of the optical component extends into the optical component from an exterior

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wall (bottom) and the alignment feature comprises a reentrant sidewall (not numbered). The alignment feature, in this case is a raceway or slot with a reentrant sidewall. For claim 22, two sidewalls with reentrant features are disclosed. For claims 23 and 26, frusto-triangular profile is can be seen in figure 6A and with two sidewalls taken together, has an hourglass profile.

4. Claims 1, 3-9, 22, 23, 26, and 29-31 are rejected under 35 U.S.C. § 102(a, e) as being anticipated by Hargreaves et al. (US 6,074,103).

Hargreaves et al. in figures 1 and 4J, discloses an optical component 4, having an alignment feature at the bottom at 41, for positioning the optical component relative to an optical bench 1. The alignment feature of the optical component extends into the optical component from an exterior wall and the alignment feature comprises a reentrant sidewall (not numbered). The alignment feature, in this case is a raceway or slot with a reentrant sidewalls and where optical fiber is positioned for positioning relative to the optical bench. For claim 3, the alignment feature, as shown in figures 3A, 3B is depressed and also for claim 4, the exterior wall is bonded to the optical bench at 14 (figure 2B). For claim 9, soldering or coating is used to connect the optical component to the bench. For claim 22, two sidewalls with reentrant features are disclosed. For claims 23 and 26, frusto-triangular profile is can be seen in figure 4J and with two sidewalls taken together, has an hourglass profile. For claims 29-31, the various steps involved in alignment are disclosed in figures 1-4.

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### Claim Rejections - 35 USC § 103

- 5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 6. Claims 5, 9-21, 24, 25 and 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Do et al. (US 6,266,196) in view of Hargreaves et al. (US 6,074,103)

As discussed above, Do et al. satisfies the limitation of claims 1, 2, 7, 8, 22, 23 and 26. However, Do et al. does not disclose the optical component being affixed to the bench using solder. Hargreaves et al. discloses soldering of optical component to the bench.

It would have been obvious to one of ordinary skill in the art to solder the optical component on the bench as taught by Hargreaves et al. so that the aligned position of the optical component can be fixed on the bench. In so far as to various thickness of coating/plating, etc, are concerned, it is a matter of design choice. Also providing multiple alignment slots would be duplication of parts.

7. Claims 10-21, 24, 25, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hargreaves et al. (US 6,074,103).

As discussed above, Hargreaves et al., satisfies the limitation of claims 1, 3-9, 22, 23, 26, and 29-31. However, Hargreaves et al. does not disclose various coating thickness and dimensions.

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It would have been obvious to one of ordinary skill in the art to solder the optical component on the bench as taught by Hargreaves et al. so that the aligned position of the optical component can be fixed on the bench. In so far as to various thickness of coating/plating, etc, are concerned, it is a matter of design choice. Also providing multiple alignment slots would be duplication of parts.

8. Claims 1-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collins (US 6,393,685) in view of Hargreaves et al. (US 6,074,103).

Collins, in figure 21, discloses in figures 21 and 26, discloses alignment of an optical component with respect to a bench. The arrangement in figure 21, the bottom part has two reentrant sidewalls and complimentary configuration for the top part. It is obvious to reverse the arrangement and that top part (optical component) with slot or dovetail-dodo configuration for and complimentary configuration for the bottom piece or bottom piece. Hargreaves et al teach soldering of optical component to the bench.

It would have been obvious to one of ordinary skill in the art to provide the mating arrangement of figure 21 for bench alignment. In so far as to various thickness of coating/plating, etc. are concerned, it is a matter of design choice. Also providing multiple alignment slots would be duplication of parts.

9. The prior art made of record and not relied upon is considered pertinent to applicant's invention. Van Leijenhorst et al. (US 4,691,586) and WO 91/06022 are cited for various arrangement of optical pieces used for alignment to a bench.

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Applicant also should consider these references in response to this office action.

Should issue arise concerning the rejection presented above, these references may be relied upon in a subsequent action to support the lack of novelty or obviousness of claimed subject matter to one of ordinary skill in the art.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to T. C. Patel whose telephone number is (703) 308-1736. The examiner can normally be reached on 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on (703) 308-2710. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1736.

TCPStel

T. C. Patel Primary Examiner Art Unit 2839

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October 31, 2002